

Appendix

Environmental Conditions

1. Georgia Strait Pipeline Crossing LP (Georgia Strait) shall follow the construction procedures and mitigation measures described in its application, its supplemental filings, and as identified in the environmental impact statement (EIS), unless modified by this Order. Georgia Strait must:
 - a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
 - b. justify each modification relative to site-specific *conditions*;
 - c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
 - d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.
2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:
 - a. the modification of conditions of this Order; and
 - b. the design and implementation of any additional measures deemed necessary (including stop work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.
3. **Prior to any construction**, Georgia Strait shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors, and contractor personnel will be informed of the environmental inspector's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.
4. The authorized facility locations shall be as shown in the EIS, as supplemented by filed alignment sheets, and shall include the staff's recommended facility locations. **As soon as they are available, and before the start of construction**, Georgia Strait shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by this Order. All requests

for modifications of environmental conditions of this Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

Georgia Strait's exercise of eminent domain authority granted under Natural Gas Act (NGA) section 7(h) in any condemnation proceedings related to this Order must be consistent with these authorized facilities and locations. Georgia Strait's right of eminent domain granted under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

5. Georgia Strait shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that will be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, and documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction** in or near that area.

This requirement does not apply to route variations recommended herein or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

- a. implementation of cultural resources mitigation measures;
- b. implementation of endangered, threatened, or special concern species mitigation measures;
- c. recommendations by state regulatory authorities; and
- d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of this Certificate, and before construction begins,** Georgia Strait shall file an initial Implementation Plan with the Secretary for review and written approval by the Director of OEP describing how Georgia Strait will implement the mitigation measures required by this Order. Georgia Strait must file revisions to the plan as schedules change. The plan shall identify:
- a. how Georgia Strait will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
 - b. the number of environmental inspectors assigned per spread, and how the company would ensure that sufficient personnel are available to implement the environmental mitigation;
 - c. company personnel, including environmental inspectors and contractors, who will receive copies of the appropriate material;
 - d. what training and instructions Georgia Strait will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
 - e. the company personnel (if known) and specific portion of Georgia Strait's organization having responsibility for compliance;
 - f. the procedures (including use of contract penalties) Georgia Strait will follow if noncompliance occurs; and
 - g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:
 - (1) the completion of all required surveys and reports;
 - (2) the mitigation training of onsite personnel;
 - (3) the start of construction; and
 - (4) the start and completion of restoration.
7. Georgia Strait shall employ a team of environmental inspectors per construction spread. The environmental inspectors shall be:

- a. responsible for monitoring and ensuring compliance with all environmental mitigative measures required by this Order, Georgia Strait's Upland Erosion Control, Revegetation and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures), and other grants, permits, certificates, or other authorizing documents;
 - b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see recommendation 6 above) and any other authorizing documents;
 - c. empowered to order correction of acts that violate the environmental conditions of this Order, and any other authorizing document;
 - d. a full-time position separate from all other activity inspectors;
 - e. responsible for documenting compliance with the environmental conditions of this Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and
 - f. responsible for maintaining status reports.
8. Georgia Strait shall file updated status reports with the Secretary on a **weekly** basis **until** all construction-related activities, including restoration and initial permanent seeding, are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:
- a. the current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
 - b. a listing of all problems encountered and each instance of noncompliance observed by the environmental inspectors during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
 - c. corrective actions implemented in response to all instances of noncompliance, and their cost;
 - d. the effectiveness of all corrective actions implemented;
 - e. a description of any landowner/resident complaints which may relate to compliance with the requirements of this Order, and the measures taken to satisfy their concerns; and

- f. copies of any correspondence received by Georgia Strait from other federal, state or local permitting agencies concerning instances of noncompliance, and Georgia Strait's response.
- 9. Georgia Strait must receive written authorization from the Director of OEP **before commencing service** from the project. Such authorization will only be granted following a determination that rehabilitation and restoration of the right-of-way is proceeding satisfactorily.
- 10. **Within 30 days of placing the certificated facilities in service**, Georgia Strait shall file an affirmative statement with the Secretary, certified by a senior company official:
 - a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
 - b. identifying which of the certificate conditions Georgia Strait has complied with or will comply with. This statement shall also identify any areas along the right-of-way where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.
- 11. Georgia Strait shall offer to conduct pre-construction well analyses to acquire baseline information about water quality and well function to those landowners with wells located within 150 feet of the construction right-of-way. This information will form the basis for post-construction monitoring efforts if problems are identified following construction. Georgia Strait shall document any complaints that were received concerning well function or water quality and describe how each was resolved in its weekly status reports to the Commission.
- 12. Georgia Strait shall not implement the open-cut method as an alternative to the proposed horizontal directional drill (HDD) or conventional bore methods **until**:
 - a. Georgia Strait files with the Secretary the specific reasons that the HDD or conventional bore method is not feasible or was not successful;
 - b. FERC staff concludes formal consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) regarding adverse impacts on federally listed species, if necessary;
 - c. Georgia Strait consults with the U.S. Army Corps of Engineers (COE) and the Washington Department of Ecology (WDOE), the NMFS, the FWS, and the Washington Department of Fish and Wildlife (WDFW) and files a detailed

site-specific, open-cut crossing plan including scaled drawings identifying all areas that would be disturbed by constructing the open-cut crossing and mitigation measures that would minimize the extent and duration of disturbance on the waterbody and associated riparian habitat;

- d. for Fishtrap Creek and Bertrand Creek, Georgia Strait shall develop a protocol in consultation with the WDOE and the WDFW to determine if contaminated sediments are present in the construction right-of-way and to develop measures to minimize the resuspension of contaminated sediments (if present) for the crossings; and
 - e. Georgia Strait has received written notification from the Director of OEP that an open-cut crossing may begin.
- 13. Georgia Strait shall prepare an explanation of the site-specific conditions at each crossing that preclude the use of the dry-ditch method where the wet-ditch method is proposed. This explanation and the results of consultations with the WDFW, the FWS, the NMFS, and other appropriate agencies regarding the crossing method shall be filed with the Secretary for review and approval by the Director of OEP **prior to construction**.
 - 14. Georgia Strait clearing crews shall avoid crossing equipment through perennial waterbodies in the project area, unless otherwise approved by the Director of OEP in Georgia Strait's initial implementation plan.
 - 15. Georgia Strait, in consultation with the WDFW, the FWS, and the NMFS, shall design and locate the hydrostatic test water intake structure in the Strait of Georgia in a manner that avoids impingement of fish and damage to nearshore marine vegetation. The design and location of the intake structure, shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**. Georgia Strait shall also file the results of as well as the results of the related consultations with the WDFW, the FWS, and the NMFS.
 - 16. Georgia Strait shall file revised Procedures incorporating the FERC-approved variance requests in tables 3.3.2-2 and 3.4.2-1 of the EIS with the Secretary **prior to construction**.
 - 17. Georgia Strait shall file with the Secretary a site-specific plan for use of the HDD method at the Cherry Point landfall for review and approval by the Director of OEP **prior to construction**. The plan should identify additional containment systems (e.g., booms and seafloor control devices) that would be used to minimize the potential for mud releases beyond the limits of the glory hole. Additionally, the plan should specify that density adjustments to the drilling mud would only be made through the use of additional dry mud compound, cement, cottonseed hulls, or other inert materials (i.e., no chemical weighting or thickening agents would be used).

18. Georgia Strait shall limit the Gulf Road pipestring fabrication area to the existing cleared opening (Georgia Strait proposed HDD Make-up Site #1), which is west of Gulf Road. Additionally, Georgia Strait shall limit the fabrication and stringing activities to the existing cleared road right-of-way and avoid clearing trees adjacent to Gulf Road unless necessary to create a safe work area.
19. Georgia Strait shall file with the Secretary for review and written approval of the Director of OEP **prior to construction**, a wetland restoration plan, prepared in coordination with the COE, the WDOE, and the WDFW, that includes detailed construction and restoration measures to minimize forested wetland impacts and addresses the need to actively revegetate wetlands. Georgia Strait shall file with the Secretary annual summary reports that compare pre- and post-construction wetland vegetation. Post-construction reports shall be filed for the first three years or **until** each wetland is successfully revegetated. The reports shall include an inventory of exotic nuisance plant species present on the construction right-of-way. For any wetlands that have not been restored by the third growing season, Georgia Strait shall file with the Secretary a site-specific plan to rectify these problem areas for review and written approval by the Director of OEP.
20. **Prior to implementing** an open cut crossing at the Cherry Point landfall, Georgia Strait shall consult with, and obtain necessary approvals from, the appropriate agencies, including the Washington Department of Natural Resources (WDNR), the WDFW, the WDOE, the NMFS, and the COE. Georgia Strait shall develop a plan to avoid or minimize impacts on sensitive resources and mitigate any loss of marine vegetation. The plan shall, at a minimum, quantify the amount of marine vegetation that would be impacted; provide scaled drawings that identify construction methods; and describe any compensatory mitigation that would be implemented during or after construction. Georgia Strait shall submit the plan to the Secretary for review and written approval by the Director of OEP **prior to implementation**.
21. Georgia Strait shall conduct post-construction surveys to quantify the impact of drilling mud on marine vegetation and prepare a plan in consultation with the WDNR, the WDFW, the NMFS, and other applicable agencies to mitigate observed impacts. Georgia Strait shall file the mitigation plan along with survey results with the Secretary for review and written approval by the Director of OEP **prior to implementation**.
22. Georgia Strait shall develop a plan in consultation with the FWS and the NMFS to gather data on sound emitted from the offshore pipeline at normal operating pressures. This data shall establish the level of sound emitted from the pipeline in relation to ambient noise levels in the southern Strait of Georgia and the distance this sound is propagated in the water column. This plan shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**. A report presenting the data collected, as part of this survey, shall be filed with the Secretary within 90 days of the completion of the survey.

23. Prior to construction, Georgia Strait shall consult with the WDFW and the NMFS to develop a detailed fish salvage and relocation plan that describes the techniques and equipment that would be used to remove fish that become stranded within the right-of-way at waterbody crossing areas. This plan shall be filed with the Secretary for review and written approval by the Director of OEP **prior to construction**.
24. Georgia Strait shall prepare a site-specific plan for launching the HDD pipestring in consultation with the FWS, NMFS, WDFW and other applicable agencies. This plan shall include specific measures that Georgia Strait would implement to mitigate impacts on marine vegetation and beach/intertidal habitats. These measures could include, but are not limited to: restricting heavy equipment activity on the beach, use of matting or pads to prevent rutting and compaction, restoration of disturbed cobble substrates, and restricting heavy work vessels to areas beyond the marine vegetation zone. Georgia Strait shall file the plan with the Secretary for review and written approval by the Director of OEP **prior to construction**.
25. Georgia Strait shall consult with the Natural Resources Conservation Service and the Whatcom County Conservation Districts regarding future stream restoration projects involving channel relocation. Georgia Strait shall file the results of these consultations and any revised construction plans to avoid interfering with planned restoration projects with the FERC **prior to construction**.
26. Georgia Strait shall not begin construction activities **until**:
 - a. Georgia Strait conducts a survey of suitable bald eagle habitat to identify nests or roosts that are within 0.5 of a mile of areas that would be disturbed by construction activities (these surveys shall follow a protocol approved by the FWS and the WDFW);
 - b. Georgia Strait, in consultation with the FWS and the WDFW, develops a management plan for each active bald eagle nest or communal roost within 0.5 of a mile of the project area; and
 - c. Georgia Strait files with the Secretary a report of the results of the bald eagle survey(s), any necessary site management plans, and documentation that the FWS and the WDFW have reviewed and approved the survey results and any necessary mitigation plans. The survey report shall include the name(s) and qualifications of the person(s) conducting the survey, method(s) used to conduct the survey, date(s) of the survey, and areas surveyed (including the mileposts or a map of the area surveyed).
27. Georgia Strait shall follow the WDFW's recommended guidelines of avoiding construction disturbances within 3,280 feet of heron rookeries between February 15 and July 31 unless

Georgia Strait files with the FERC documentation that the WDFW has waived the timing restriction.

28. Georgia Strait shall develop and implement an environmental complaint resolution procedure. The procedure shall provide landowners with clear and simple directions for identifying and resolving their environmental mitigation problems/concerns during construction of the project and restoration of the right-of-way. Prior to construction, Georgia Strait shall mail the complaint procedures to each landowner whose property would be crossed by the project. In its letter to affected landowners, Georgia Strait shall:
 - a. provide a local contact that the landowners should call first with their concerns; the letter shall indicate how soon a landowner shall expect a response;
 - b. instruct the landowners that, if they are not satisfied with the response, they shall call Georgia Strait's Hotline; the letter shall indicate how soon to expect a response; and
 - c. instruct the landowners that, if they are still not satisfied with the response from Georgia Strait's Hotline, they shall contact the Commission's Enforcement Hotline at (877) 303-4340.

In addition, Georgia Strait shall include in its weekly status report a copy of a table that contains the following information for each problem/concern:

- a. the date of the call;
 - b. the identification number from the certificated alignment sheets of the affected property;
 - c. the description of the problem/concern; and
 - d. an explanation of how and when the problem was resolved, will be resolved, or why it has not been resolved.
29. Georgia Strait shall file documentation from the WDOE for its Certification of Consistency with the Washington Coastal Zone Management Plan with the Secretary **prior to construction.**
30. Georgia Strait shall defer construction of facilities and use of all staging, storage, or temporary work areas and new or to-be-improved access roads **until** Georgia Strait files with the Secretary reports, plans, and related State Historic Preservation Officer comments; and the Director of OEP reviews and approves all cultural resources reports and plans, and notifies Georgia Strait in writing that construction may proceed.

All material filed with the FERC containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein

clearly labeled in bold lettering: “**CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE.**”

31. Georgia Strait shall conduct a noise survey to verify that the noise from the Cherry Point Compressor Station operated at full load does not exceed a day-night equivalent sound level (L_{dn}) of 55 decibels of the A-weighted scale (dBA) at any noise-sensitive areas (NSA), and file the results of the noise survey with the Secretary **no later than 60 days** after placing the compressor station in service. If the noise attributable to the operation of the compressor station at full load exceeds an L_{dn} of 55 dBA at any nearby NSAs, Georgia Strait shall file a report on what changes are needed and shall install additional noise controls to meet that level **within 1 year of the in-service date**. Georgia Strait shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary **no later than 60 days** after the additional noise controls are installed.
32. Georgia Strait shall conduct a noise survey to verify that the noise from the meter facilities does not exceed an L_{dn} of 55 dBA at any NSAs, and file the results of the noise survey with the Secretary **no later than 60 days** after placing the meter facilities in service. If the noise attributable to the operation of the meter facilities exceeds an L_{dn} of 55 dBA at any nearby NSAs, Georgia Strait shall file a report on what changes are needed and shall install additional noise controls to meet that level **within 1 year of the in-service date**. Georgia Strait shall confirm compliance with the L_{dn} of 55 dBA requirement by filing a second noise survey with the Secretary **no later than 60 days** after the additional noise controls are installed.
33. Georgia Strait shall adopt the following route variations:
 - a. the I-5 Variation;
 - b. the Percie Road Variation; and
 - c. the Trillium Variation.
34. Georgia Strait shall adopt alternative site B for the Cherry Point Compressor Station as described in its October 11, 2001 application amendment